

TITLE
UTILITY LIGHT WITH BRACKETS

BACKGROUND OF THE INVENTION

5 The present invention relates generally to utility lights and, more particularly, to a fluorescent utility light which may be mounted in a single workstation, for example, or manually moved from site to site.

 Portable lights which can be manually moved and suspended about a work site to aid a user to obtain desirable lighting conditions are well known. It has been the practice to use incandescent light bulbs, suitably encased in light guards, for this purpose. Such lights are often referred to as trouble lamps, extension lights, work lights, inspection lights, and the like, and are commonly employed by mechanics and other workers who require a concentration of lights in a frequently changing location. Such a trouble light is shown in the U.S. Pat. No. 4,774,647 to Kovacik et al.

15 Fluorescent lights have several advantages in use as compared with the incandescent bulbs. As an example, for the same wattage fluorescent lights usually provide more light with less glare. In the past, attempts have been made to convert portable lights such as extension lights to fluorescent tubes. However, a number of serious problems have arisen, particularly in attempting to adapt a fluorescent tube to a satisfactory portable assembly. A common complaint is that the electrical connections between a fluorescent tube and its mounting and electrical conductors are not originally, or do not long remain, sufficiently tight to provide desired electroconductivity, as compared to the more commonly used incandescent light bulbs. When inadequate electrical contacts occur, fluorescent tubes exhibit disproportionately high electrical resistance.

25 It is, of course, quite important that a fluorescent tube be firmly mounted and snugly held by its supports, especially if the tube is designed for portable use. While an incandescent bulb has a relatively large area of contact for electrical connection around its threaded base, the usual fluorescent tube has only a pair of relatively fine, fragile pins extending from opposite ends of the tube which constitute electrical

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terminals. In order to ensure a firm and constant electrical connection with the terminal pins, prior socket connections have been quite heavy and cumbersome. In some instances, sockets used for each set of pin terminals are mounted apart facing each other as on a single bracket somewhat longer than the fluorescent tube itself. Such sockets
5 are usually stationary and not movable with respect to each other. Such a restriction often limits the manner in which the fluorescent tube can be mounted and used.

Additionally, it has been the practice to mount a ballast for the fluorescent tube in-line in the electrical cord which energizes the tube. The ballast which includes a transformer is normally quite heavy, which adds to the problems of supporting and
10 mounting the fluorescent tube. Further, a ballast generates heat in use and the added heat, so generated, can be a problem when adjacent to the tube.

These structural problems become even more acute in portable fluorescent tube assemblies. Portable units are much more susceptible to rough handling. The tube assembly may be dropped, subjected to jarring, vibration, and the like. Such
15 mechanical shocks tend to dislodge or momentarily interrupt an electric current to the tube pins at the opposite ends of the tube and produce a high voltage arc, thereby introducing health and safety hazards.

The U.S. Pat. No. 4,262,327 shows a portable fluorescent tube having a lens and a hook for hanging the assembly. The assembly includes a tubular envelope
20 surrounding a standard fluorescent tube and closed by a pair of end sockets. One of the end sockets has a starter switch mounted thereon and a ballast is connected in an electrical supply line near an electrical plug. However, in order to change the fluorescent tube, such a light assembly must be disassembled.

The U.S. Pat. No. 5,921,658 shows a fluorescent utility light including an
25 elongate body having a curved handle and an upper portion with a removable transparent lens for enclosing a fluorescent lamp in a socket. A reflector in the body directs light from the lamp through a front wall and side walls of the lens. A movable hook is provided at an upper end of the body and a power cord for the lamp extends through a bottom wall of the handle. An electrical socket also is provided in the bottom
30 wall of the handle such that an electrical cord plugged into the socket extends generally

parallel to the power cord. A magnet on a clip engages a groove formed in a central portion of the body and the clip and the magnet can be rotated about the body to various detent positions. A plurality of sawtooth ridges formed on an interior surface of a top wall of the lens captures light from the lamp and directs it through the top wall of the lens.

It is an object of the present invention to produce a fluorescent utility light which may be mounted for use in a temporary or permanent work site, or may be readily conveyed from site to site in a portable fashion.

SUMMARY OF THE INVENTION

The above, as well as other objects of the invention, may typically be achieved by a fluorescent utility light comprising: an elongate hollow cylindrical body formed of a translucent material having a first end and a spaced apart second end; an elongate fluorescent lamp disposed within the body and having a first end with extending conductor pins and a spaced apart second end with extending conductor pins; a first socket for receiving the pins of the first end of the lamp; a cap secured to the first end of the cylindrical body for containing the first socket within the first end of the body; a second socket for receiving the pins of the second end of the lamp; a handle secured to the second end of the cylindrical body for containing the second socket within the second end of the body; electrical conductor providing electrical communication between a source of electrical energy and the lamp, the conductor extending through the handle; and support means attached to the cap and the handle for supporting the assembly.

BRIEF DESCRIPTION OF THE DRAWINGS

The above, as well as other objects and advantages of the present invention, will become readily apparent to those skilled in the art from the following detailed description of a preferred embodiment when considered in the light of the accompanying drawings in which:

Fig. 1 is an exploded perspective view of a fluorescent utility light in accordance with the present invention;

Fig. 2 is a front elevational view of the assembled form of the utility light illustrated in Fig. 1;

5 Fig. 3 is a left side elevational view of the utility light illustrated in Fig. 2;

Fig. 4 is a right side elevational view of the utility light illustrated in Fig. 2; and

Fig. 5 is a sectional view of the utility light taken along lines 5-5 in Fig. 3.

DESCRIPTION OF THE PREFERRED EMBODIMENT

10 There is shown in the drawings a fluorescent utility light **10** in accordance with the present invention. The utility light **10** has an elongate hollow cylindrical body **12** formed of a translucent material. Typically the material is plastic.

An elongate fluorescent tube **14** is adapted to be received within the hollow interior of the body **12**. The tube **14** is provided with a set of conductor pins **16**
15 extending from a first end and a set of conductor pins **18** extended from the second end.

A socket **20** for receiving the pins **16** of the fluorescent tube **14** is disposed in one end of the body **12**. The socket **20** is secured within the interior of the hollow body **12** by a cap **22** formed of a pair of cooperating sections. The sections of the cap **22** are typically fastened together by a threaded fastener **24**. The cap sections include a pair
20 of inwardly extending bosses **26** that are received by apertures **28** formed in the body **12** and function to receive the threaded fastener **24** and secure the socket **20** within the interior of the hollow body **12**.

Another socket **30** for receiving the pins **18** of the fluorescent tube **14** is disposed in the opposite end of the body **12**. The socket **30** is secured within the
25 interior of the hollow body **12** by a handle **32** formed of a pair of cooperating sections. The sections of the handle **32** are typically fastened together by threaded fasteners **34**. A plurality of inwardly extending bosses **36** are provided to receive the threaded fasteners **34** in a well known manner. The uppermost pair of inwardly extending bosses **36** of the handle **32** also function to secure the socket **30** in place, as well as, extend

through suitable apertures 38 in the hollow body 12 at the end opposite to the apertures 28.

Supporting hooks 40 and 42 are mounted to the light assembly at opposite ends thereof. The hooks 40 and 42 are pivotally mounted to the cap 22 and the handle 32, respectively. In the illustrated embodiment, the hooks 40 and 42 are mounted by way of ball and socket-type hinge structures. One such structure is illustrated and described in U.S. Pat. No. 5,921,658. The hooks 40 and 42 may be utilized for supporting the light assembly during storage or use, for example.

The cap 22 is provided with a circumferential channel 44 which is adapted to receive a bracket in the form of a light holder clip stand 46. The clip stand 46 includes a generally C-shaped clip 48 which is formed of resilient material to enable the ends of the clip 48 to part sufficiently to be received within the channel 44 and to then closed to snugly engage the channel 44 of the cap 22. The clip stand 46 also includes a generally planar base 49 for engaging a support surface.

Similarly, a channel 54 is formed in the handle 32 to receive a C-shaped clip 48' of another light holding clip stand 46'. The brackets in the form of the clip stands 46 and 46' are substantially identical and are typically formed of a plastic material. Once the clip stands 46 and 46' are suitably mounted to the light assembly, the stands may be rotated about the assembly to any desired position, thus providing adequate support for the assembly on a planar surface. For example, the bases 49 and 49' can be used to support the light 10 on a horizontal surface. Also, the bases 49 and 49' can be attached to a vertical surface by suitable fasteners to removably support the light 10 by selectively engaging and disengaging the clips 48 and 48' with the channels 44 and 54 respectively. Magnetic clips, such as those shown in the U.S. Patent No. 5,921,658 (incorporated herein by reference), can be substituted for the clip stands 46 and 46'.

A push button switch 50 is mounted in a suitable aperture 52 formed in the cooperating sections of the handle 32. The switch 50 is typically slightly recessed so as to be properly protected against accidental actuation.

Normal associated electrical components such as a ballast **56**, an associated power line **58**, and a female electrical receptacle **60** are suitably positioned in the handle portion of the light assembly.

5 The invention is more easily comprehended by reference to specific embodiments recited hereinabove which are representative of the invention. It must be understood, however, that the specific embodiments are provided only for the purpose of illustration, and that the invention may be practiced otherwise than as specifically illustrated without departing from its spirit and scope.